UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,083	01/14/2002	Paul Harry Abbott	GB920010052US1	6326

			EXAMINER
29683	7590	03/07/2006	WILLIAMS, JEFFERY L

HARRINGTON & SMITH, LLP
4 RESEARCH DRIVE
SHELTON, CT 06484-6212

ART UNIT	PAPER NUMBER
2137	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 December 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5,7,8,11 and 13-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,7,8,11,13-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1   **DETAILED ACTION**

2

3   Claims 1, 2, 5, 7, 8, 11, 13, 14, 15 are pending.

4   Claims 3, 4, 6, 9, 10, and 12 have been canceled.

5

6   ***Continued Examination Under 37 CFR 1.114***

7

8   A request for continued examination under 37 CFR 1.114, including the fee set

9   forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

10   application is eligible for continued examination under 37 CFR 1.114, and the fee set

11   forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

12   has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

13   12/29/05 has been entered.

14

15   All objections and rejections not set forth below have been withdrawn.

16

17

18   ***Claim Rejections - 35 USC § 103***

19

20   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

21   obviousness rejections set forth in this Office action:

22   (a) A patent may not be obtained though the invention is not identically disclosed or described as set
23   forth in section 102 of this title, if the differences between the subject matter sought to be patented and
24   the prior art are such that the subject matter as a whole would have been obvious at the time the

1 invention was made to a person having ordinary skill in the art to which said subject matter pertains.
2 Patentability shall not be negatived by the manner in which the invention was made.
3
4 **Claims 1, 2, 5, 7, 8, 11 and 13 – 15 are rejected under 35 U.S.C. 103(a) as**

5 **being unpatentable over McManis, "System and Method for Protecting Use of**

6 **Dynamically Linked Executable Modules", U.S. Patent 5,757,914.**

7

8 Regarding claim 1, McManis discloses:

9 *a primary library file, the primary library file having a digital signature* (McManis,

10 col. 1, line 65 – col. 2, line 11; col. 1, lines 48-63, McManis discloses that every file has

11 a digital signature).

12 *a loader program arranged to obtain a digital signature key and further arranged*

13 *to load the primary library file, wherein, if a public key cannot be obtained via a virtual*

14 *machine provider, the digital signature key is a hidden public key internal to the loader*

15 *program and, if a public key can be obtained via the virtual machine provider, the digital*

16 *signature key is the public key obtained via the virtual machine provider* (McManis, fig.

17 1, elems. 110, 112; col. 2, lines 22 – 37, 40-43; col. 2, lines 22-37) The verifier is a

18 "loader program" as it enables the loading of each program module. Furthermore, the

19 loader program possesses the "hidden" public key (note: McManis never discloses an

20 open display of the key), enabling the loader program to perform the processing of the

21 digital signatures. McManis does not disclose that the key could be obtained from a

22 virtual machine provider. The public key of the loader program is used even if it couldn't

23 be obtained by from a virtual machine provider.

1   *and a plurality of secondary files arranged to be referenced by the primary library*

2   *file, each of the plurality of secondary files having a digital signature* (McManis, fig. 1,

3   elems. 116, 118, 120; col. 2, lines 1,2; col. 3, lines 17-21).

4   McManis shows the operation of his system as a slice in time, wherein every file

5   is verified (McManis, col. 1, line 65 – col. 2, line 4; col. 2, lines 53-55). He does not

6   disclose, as can be suggested by the claims, that the primary file is initially verified

7   before being loaded and then secondary files are verified and loaded. However,

8   McManis discloses that every file, including the primary file, contains a digital signature

9   and that the digital signature is necessary to verify the authenticity of every called file

10   before that file is loaded (McManis, col. 1, line 65 – col. 2, line 44). It would have been

11   obvious to one of ordinary skill in the art to arrange, at the time of the initialization

12   loading of the primary file, for the loader program to load the primary file by verifying the

13   digital signature of the primary file. This would have been obvious because one of

14   ordinary skill in the art would have been motivated to verify the authenticity of the

15   primary file, as taught by McManis, when the primary file is initially loaded - so as to

16   protect the system's integrity at all times. Thus the qualification of McManis discloses:

17   *wherein the loader program is arranged to verify and selectively load the primary*

18   *library file by comparing the obtained digital signature key with the digital signature of*

19   *the primary library file , the primary library file being further arranged to subsequently*

20   *verify and selectively load the plurality of secondary files by calling the loader program*

21   *to compare the obtained digital signature key with the digital signature of each of the*

22   *plurality of secondary files* (McManis, col. 1, line 65 – col. 2, line 44; fig. 1, 2).

1   Regarding claim 1, the qualification of McManis does not disclose that the

2   *software installation is a virtual machine installation.* However, the system of McManis,

3   assigned to Sun Microsystems, Inc., is disclosed as being operable on "virtually any

4   type of computer", including architecturally distinct systems such as Sun workstations,

5   IBM compatible computers, and Macintosh computers. It would have been obvious to

6   one of ordinary skill in the art, based upon logical reasoning, to employ a virtual

7   machine installation in the system of McManis. This would have been obvious because

8   one of ordinary skill in the art would have logically recognized that a virtual machine

9   installation would allow the system of McManis to be employed on such a diverse and

10   distinct set of architectures. Thus the qualification of McManis discloses: *wherein the*

11   *software installation is a virtual machine installation.*

12

13   Regarding claim 2, the modification of McManis discloses:

14   *the plurality of files including at least one tertiary file referenced by at least one*

15   *secondary file of the plurality secondary files, wherein after successful verification and*

16   *selective loading of the at least one secondary file, the at least one secondary file is*

17   *arranged to manage the verification and selective loading of the at least one tertiary file*

18   (McManis, fig. 1, elems. 118, 120; col. 3, lines 12-21, 30-37). McManis discloses that

19   each file can contain a plurality of procedure calls to other files, thus a secondary file

20   may call a tertiary file.

21

1   Regarding claim 5, the modification of McManis discloses that all files contain

2   digital signatures so that they may be verified with a digital signature key (McManis, col.

3   2, lines 22-37). McManis further discloses that verifiable files may contain a number of

4   portions, including a methods portion and a data portion. Each portion is verified by a

5   separate digital signature (McManis, col. 4, lines 54-67). Thus, McManis discloses the

6   digital signature key used to verify the file as being a combination of keys. These

7   verifiable files are often authored, maintained, or updated ("administrated") by others

8   ("administrators") (McManis, col. 1, lines 10-27). Thus, the modification of McManis

9   discloses at least one of the files being an administrator configurable file.

10

11   Regarding claim 14, the modification of McManis does not disclose that *the*

12   *virtual machine provider is accessed through an internet.* However, would have been

13   obvious, based upon logical reasoning, to one with knowledge of technology, that a

14   provider of software can be accessed by means of an internet. Thus, one of ordinary

15   skill in the art would have been motivated to use a network to provide access to a virtual

16   machine provider if said access to the software provider was necessary.

17

18   Regarding claim 13, it is a computer program claim employed the system claims

19   above, and is rejected by the same reasons.

20   Regarding claims 7, 8, 11, and 15, they are the method claims employed by the

21   system claims above, and are rejected by the same reasons.

22

1

2   ***Response to Arguments***

3

4   Applicant's arguments filed 12/29/2005 have been fully considered but they are

5   not persuasive.

6

7   The applicant's representative argues primarily that:

8

9   (i)   *The claimed invention recites "wherein the loader program is arranged to*

10 *verify and selectively **load** the primary library file **by comparing the obtained digital***

11 ***signature key with the digital signature of the primary library file ...** McManis's*

12 *verifier is not a "loader program." Just because a software module is able to verify the*

13 *authenticity of an application does not mean that it will also load such application."*

14 [emphasis added] (Remarks, page 9).

15

16   In response, the examiner kindly invites the applicant's representative to refer to

17 the reasons of record as to why the examiner asserts that the module of McManis

18 meets the limitation as claimed of a "loader program" which, as claimed, "loads" by

19 "comparing" (verifying) a digital signature.

20   (ii)   *Applicant asserts that McManis discloses a verifier that is usable by a*

21 *calling application and a called application, but does not disclose a loader arranged to*

22 *obtain a digital signature key and further arranged to load the primary library file, as*

1   *claimed. Since McManis is concerned with preventing use or export of certain*

2   *cryptographic routines, trade secret functions, and functions protected by contract*

3   *(column 1, lines 37-63), McManis is not concerned with the basic software but with*

4   *certain called routines and so it not concerned with the initial loading of a base*

5   *application, such as a JVM* (Remarks, page 9).

6

7   In response, the examiner notes the reasoning applied by the applicant's

8   representative. Essentially, the applicant's representative has argued the concerns of

9   McManis, and that McManis does not meet claim limitations because his concerns are

10   allegedly different than the concerns disclosed by the applicant.

11   First, the examiner respectfully asserts that the applicant's representative has

12   mischaracterized the reference of McManis (i.e. *McManis is concerned with preventing*

13   *use or export of certain cryptographic routines, trade secret functions, and functions*

14   *protected by contract*). In actuality, McManis discloses that current software

15   development calls for software modules that are independently administered and bound

16   at run time. Thus the concern is that software can be corrupted, as a third party can

17   replace certain modules with unauthorized ones. McManis, then, further discloses that

18   his solution is seen to be beneficial for protecting software pertaining to cryptography,

19   as such cryptographic software is also developed in a modular way.   It is clear,

20   however, that the application of McManis' solution to cryptographic software is

21   exemplary and is not a limitation of the solution of McManis. (McManis, col. 1, lines 10-

22   63).

1   Second, the examiner notes that the argument, the reference of McManis is

2   deficient as McManis *it* [examiner presumes applicant's representative to mean "is"] *not*

3   *concerned with the initial loading of a base application, such as a JVM*, is unpersuasive.

4   In response to applicant's argument that the references fail to show certain features of

5   applicant's invention, it is noted that the features upon which applicant relies (i.e., *the*

6   *initial loading of a base application, such as a JVM)* are not recited in the rejected

7   claim(s). Although the claims are interpreted in light of the specification, limitations from

8   the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

9   USPQ2d 1057 (Fed. Cir. 1993).

10   In light of the above reasons and the reasons of record, shown in the prior

11 response to applicant's arguments, the examiner finds the arguments of the applicant's

12 representative to be unpersuasive.

13

14 (iii)   *Applicant, in response to the above paragraph, again asserts that McManis does*

15 *not disclose loading and does not disclose loading as being part of the verification*

16 *process. McManis does not disclose that the primary file is verified by a loading*

17 *program* (Remarks, page 10).

18

19   In response, the examiner respectfully invites the applicant to review the

20 applicant's own disclosure.

21   First, respecting the claim language, the applicant claims a "loader program"

22 stating: *wherein the loader program is arranged to verify and **selectively load** the*

1   *primary library file* **by comparing the obtained digital signature key with the digital**

2   **signature of the primary library file** ... (Claim 1, emphasis added). Thus, while the

3   applicant appears to dispute the constitution of a "loader program", the examiner

4   asserts, for the reasons of record, that the prior art meets the limitations of a "loader

5   program" as claimed.

6   Second, this claim analysis respecting a "loader program", is clearly supported by

7   the applicant's own disclosure. The applicant discloses that a "Java launcher" or

8   "program loader" may "load" a primary DLL file. The primary DLL file may "load" a

9   secondary configuration file, such as a policy file. The secondary configuration file may

10 "load" a tertiary configuration file (Specification, page 5, par. 5 – page 6, par. 2). In one

11 aspect, the applicant discloses that it is the **operating system** that loads all such files.

12 On the other hand, the applicant describes the "loader program" as "loading" files via

13 the verification of the digital signatures of the files to be "loaded" (Specification, page 6,

14 par. 3 – page 8, par. 1). Nowhere, however, has the applicant provided a definition of

15 what actually constitutes "loading". Rather, the applicant has described numerous and

16 very different computer elements ("operating system", "loader program", a "java.policy

17 file") as able to "load" and for performing "loading". In light of such liberal and broad

18 disclosure by the applicant respecting the terms "load" and "loading", as well as the

19 claim language, the applicants arguments are unpersuasive.

20   Thus, in light of the above reasons and the reasons of record, shown in the prior

21 response to applicant's arguments, the examiner finds the arguments of the applicant's

22 representative to be unpersuasive.

1

2   (iii)   Applicant's representative argues the limitations of the canceled claims 4

3   and 10, which were rejected by the combination of McManis and Menezes.

4

5   In response, the examiner asserts that such arguments are moot in light of the

6   cancellation of such claims and the subsequent modification and inclusion of the claim

7   language within claims 1 and 7.

8

9   (iv)   *Applicant asserts that McManis does not disclose or suggest the limitation*

10   *successful verification and selective loading of one of the at least one secondary tile,*

11   *the at least one secondary file is arranged to manage the verification and selective*

12   *loading of the at least one tertiary tile." Even if column 3, lines 12-21 and 30-37, figure*

13   *1, and elements 1 18 and 120 of McManis could be construed to as a suggestion for a*

14   *tertiary file, McManis does not disclose or suggest that that "at least one secondary file*

15   *is arranged to manage the verification and selective loading of the at least one tertiary*

16   *file." (Remarks, page 13)*

17

18   In response, the examiner asserts that McManis discloses first, second, third,

19   fourth, and more program modules. Each file can contain a plurality of procedure calls

20   to other files, thus a secondary file may call a tertiary file. (McManis, fig. 1, elems. 118,

21   120; col. 3, lines 12-21, 30-37).

22

1   (v)   *Applicant asserts that McManis contains no teaching or suggestion of the*

2 *limitation wherein the loader program is further arranged to verify the digital signature of*

3 *the at least one administrator-configurable file using the private key and does not*

4 *disclose an administrator-configurable file." Thus, it is respectfully submitted that claims*

5 *5, and 11 are allowable over the prior art of record* (Remarks, page 13).

6

7   In light of the reasons of record, the examiner finds the arguments of the

8 applicant's representative to be unpersuasive. Furthermore, applicant's arguments fail

9 to comply with 37 CFR 1.111(b) because they amount to a general allegation that the

10 claims define a patentable invention without specifically pointing out how the language

11 of the claims patentably distinguishes them from the references.

12

13

14

15   *Conclusion*

16

17   A shortened statutory period for reply is set to expire **3** months (not less than 90

18 days) from the mailing date of this communication.

19   Any inquiry concerning this communication or earlier communications from the

20 examiner should be directed to Jeffery Williams whose telephone number is (571) 272-

21 7965. The examiner can normally be reached on 8:30-5:00.

1   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

2   supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

3   number for the organization where this application or proceeding is assigned is (703)

4   872-9306.

5   Information regarding the status of an application may be obtained from the

6   Patent Application Information Retrieval (PAIR) system. Status information for

7   published applications may be obtained from either Private PAIR or Public PAIR.

8   Status information for unpublished applications is available through Private PAIR only.

9   For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

10 you have questions on access to the Private PAIR system, contact the Electronic

11 Business Center (EBC) at 866-217-9197 (toll-free).

12

13
14 Jeffery Williams
15 AU: 2137
16

EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER